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June 21, 2023

Sanjay K. Rai, Ph.D., Acting Secretary of Higher Education
Maryland Higher Education Commission (MHEC)
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Dear Dr. Rai:

This letter is in response to the notification received on May 23, 2023, regarding Johns Hopkins University's proposal titled, "New Academic Program Doctorate in Physical Therapy (DPT)" degree program. The University of Maryland, Baltimore is filing an objection to Johns Hopkins University's proposed DPT program based on the criteria of: "not meeting a regional or statewide need consistent with the State Plan for Postsecondary Education" based on evidence of market demand, projections, and existing programs; and "unreasonable program duplication which would cause demonstrable harm to another institution" providing evidence of replication in curriculum, program objectives, faculty shortages, and saturation of learning placement sites.

COMAR 13B.02.03.27 – Not meeting a regional or Statewide need consistent with the State Plan for Postsecondary Education.

Market Demand

The University of Maryland, Baltimore embraces the 2022 Maryland State Plan for Higher Education[1], which centers around three key goals: student access, student success, and innovation. To meet current employment needs, in May 2023, the University of Maryland, Baltimore graduated 66 students from its Doctor of Physical Therapy (DPT) program and has 71 students enrolled for the DPT Class of 2026. Also, in September 2023, the University of Maryland, Eastern Shore will graduate 30 DPT students and will enroll 34 students for their DPT Class of 2026. However, there is substantial evidence projecting a decline in employment growth for DPT graduates. The Maryland Department of Labor projections of 6,476 new positions in Physical Therapy by 2030[2], prepared in the Summer of 2022 and will not be updated in the Summer of 2024, only acknowledges growth **with no consideration for surplus**.

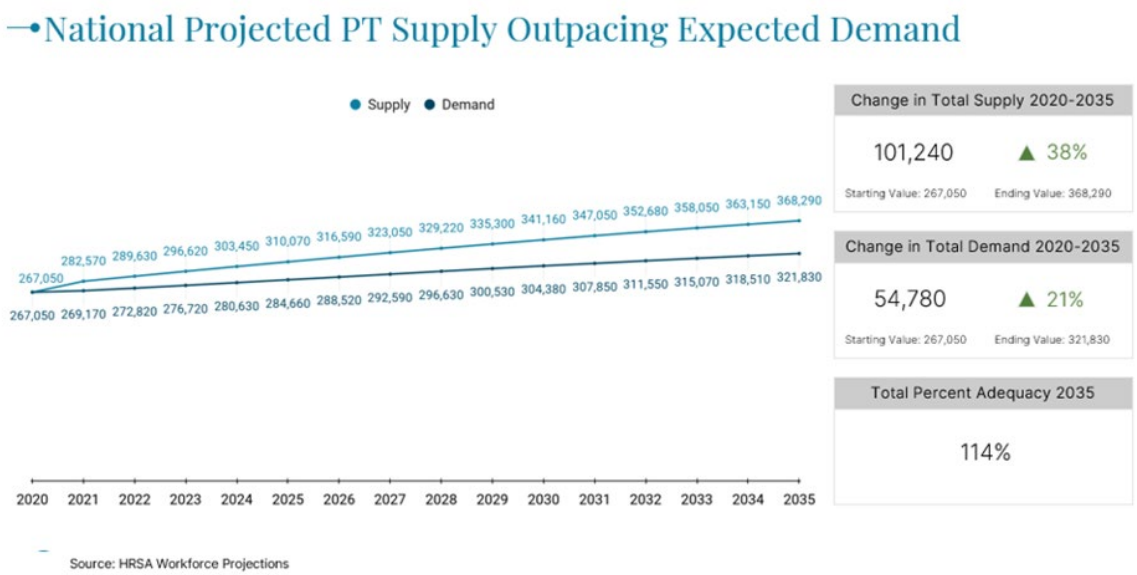
The supply and demand data referenced in the Johns Hopkins University application was published in 2010 and based on projections from 2008. As indicated in Tables 1 and 2 below, current projections by the Department of Health and Human Services (DHHS), Health Resources & Services Administration (HRSA) suggests a 38% increase in supply vs 21% increase in demand, nationally, of Physical Therapists (PT) by

[1] Maryland Higher Education Commission (MHEC), 2022 State Plan for Higher Education, https://mhec.maryland.gov/Pages/2021-2025-Maryland-State-Plan-for-Higher-Education.aspx (accessed 12 June 2023).
[2] Maryland Occupational Projections. Maryland Department of Labor. https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml (accessed 12 June 2023).

2035.[3] The addition of the Johns Hopkins University's DPT program, with an expected cohort size of 70 students, will significantly contribute to the region's surplus of PTs and will negatively impact graduate employment rates, threatening existing accredited DPT programs. This imbalance of supply and demand is predicted in Maryland with supply (6,400) outpacing demand (5,520) in 2025 when Johns Hopkins University (JHU) will enroll their first cohort. By 2028, when JHU will graduate their first cohort, the HRSA indicates a supply of 7,170 and demand 5,740 for Maryland. Table 3 below shows regional projections (which includes **DC, Maryland, Virginia, Delaware, Pennsylvania, and New Jersey**) indicate a **surplus of 52,920 vs a demand of 38,430**, a difference > 13,000 by the year 2035.

The Commission on Accreditation in Physical Therapy Education (CAPTE) requires employment rates for graduates meet at least 90%, averaged over two years.[4] With 36 accredited DPT programs in the border states of Delaware, Pennsylvania, Virginia, West Virginia and the District of Columbia; and two existing DPT programs in Maryland, projections for employment must be considered for future graduates. Projections made by the Maryland Department of Labor, the U.S. Department of Labor, the American Physical Therapy Association, and the DHHS Health Resources and Services Administration do not make a statement about the implementation of new training programs for physical therapists but the DHHS Health Resources and Services does provide a definition of Supply being "the number of workers active in the workforce, which consists of people working and people actively seeking employment" and Demand as "the number of workers required to provide a level of service that will be utilized given patient health-seeking behavior and ability/willingness to pay for services". The Maryland Department of Labor's website, however, states, "The projections should be used with other sources of information when making important decisions about business expansion, **educational program development** and career choices" and that "it is unlikely that the projections data will precisely predict actual employment developments due to unforeseen state, national and international trends and policies".

Table 1:



[3] Workforce Projections: Projected Supply and Demand of Healthcare Workers Through 2035: Physical Therapists. https://data.hrsa.gov/topics/health-workforce/workforce-projections#top (accessed 12 June 2023).
[4] The Commission on Accreditation in Physical Therapy Education (CAPTE), Accreditation Handbook. https://www.capteonline.org/about-capte/policies-and-procedures/accreditation-handbook (accessed 12 June 2023).

Table 2:

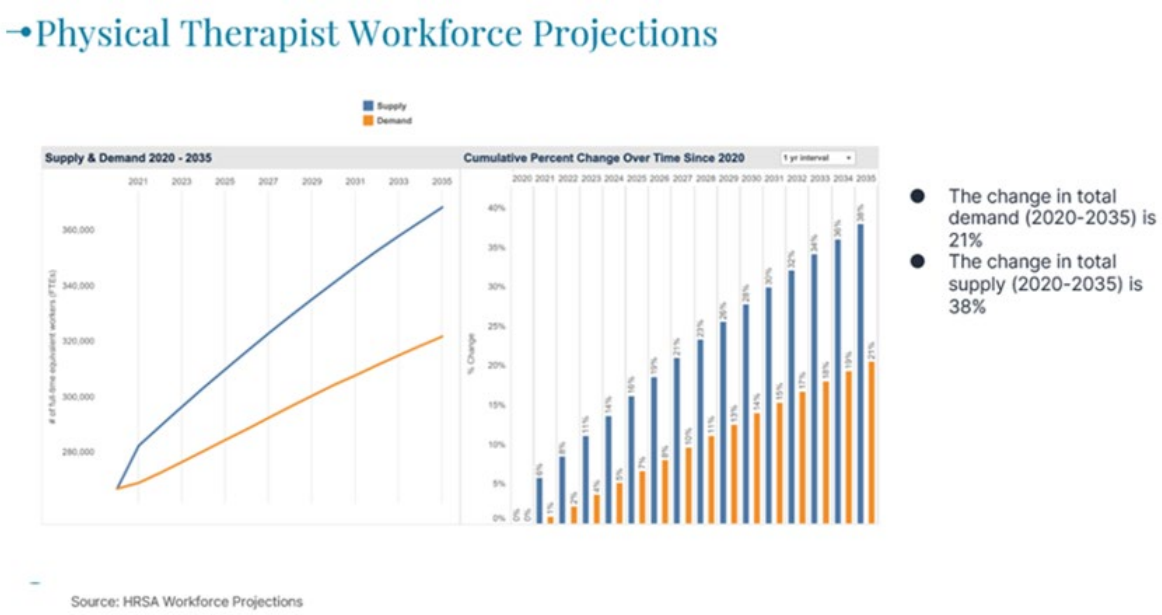
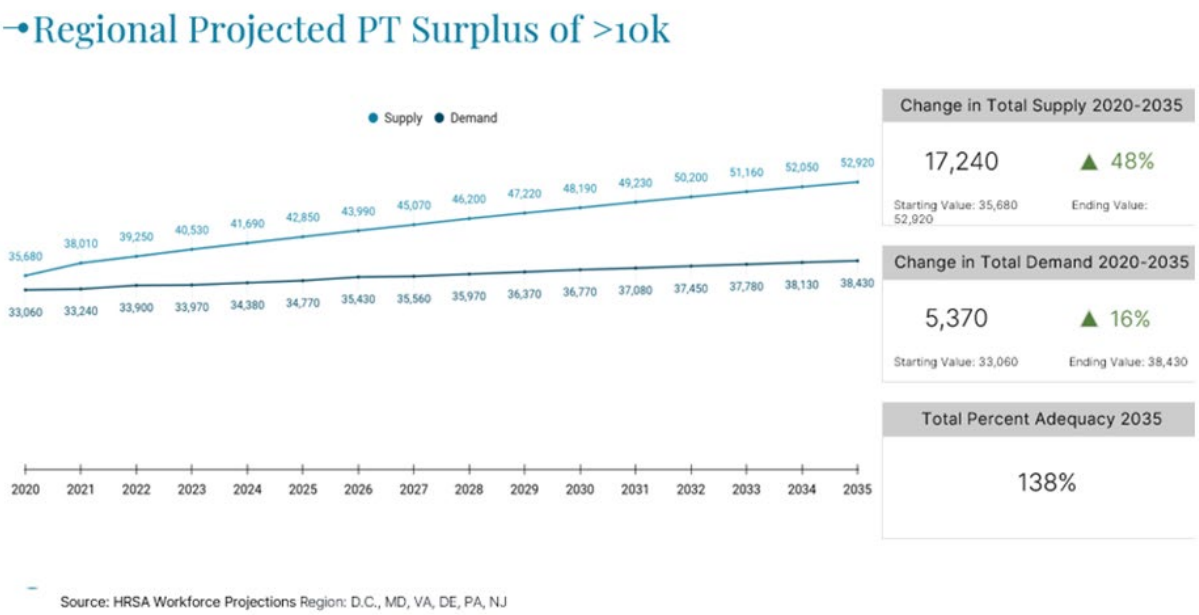


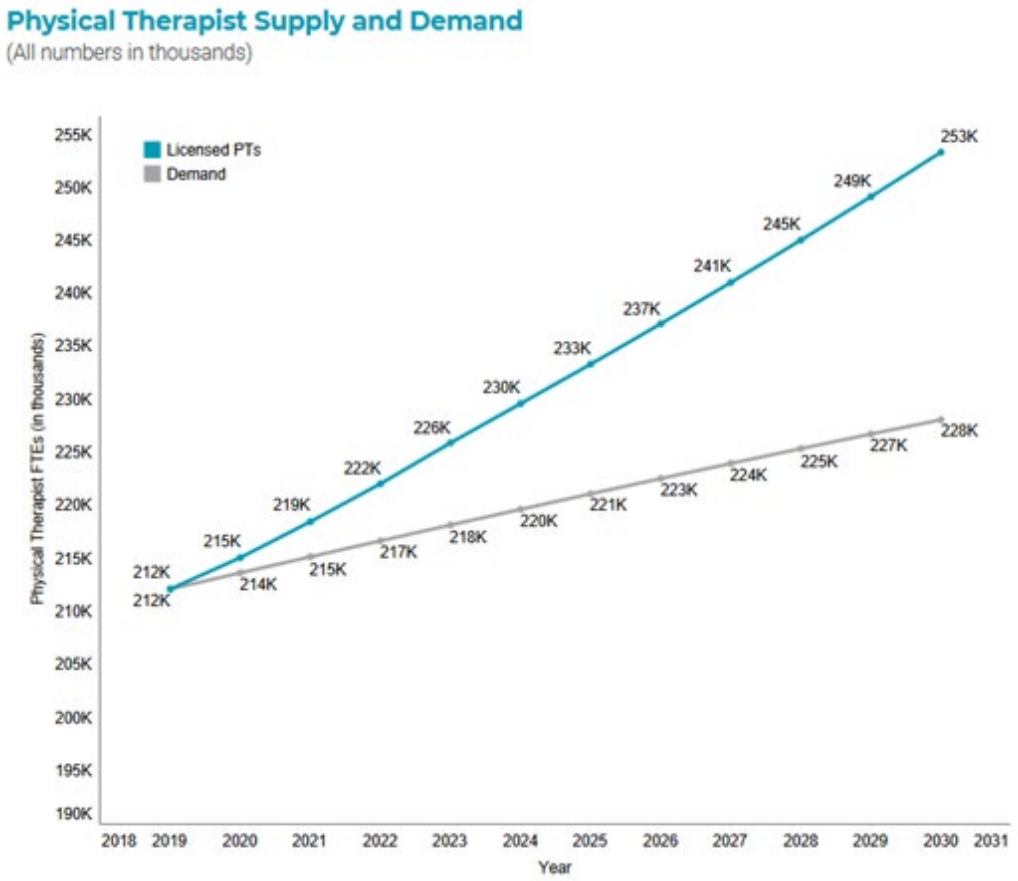
Table 3:



The American Physical Therapy Association (APTA), founded in 1921, is an individual membership professional organization representing 100,000-member physical therapists, physical therapist assistants, and students of physical therapy.[5] In December 2020, the APTA published a report entitled, "APTA

[5] American Physical Therapy Association (APTA). https://www.apta.org/apta-and-you/about-us (accessed 06 January 2023).

Physical Therapy Workforce Analysis"[6], which supports the projection that the supply of physical therapists is outpacing the demand for services. Based on national trends in graduation rates, licensing, and attrition, the APTA predicts an estimated demand for 228,000 PTs in 2030, versus a supply of 253,000, resulting in a surplus of 25,235 physical therapists (see chart below).



American Physical Therapy Association (APTA). Workforce Analysis - A Report from the American Physical Therapy Association, December 2020.

Existing Programs

Currently, there are two Commission on Accreditation in Physical Therapy Education (CAPTE) accredited programs that offer a Doctorate in Physical Therapy (DPT) in Maryland: University of Maryland School of Medicine and University of Maryland Eastern Shore. The request from Johns Hopkins University is a duplication of area programs and does not meet a regional nor statewide need consistent with the Maryland State Plan for Postsecondary Education[7]. As previously mentioned, within a radius of 250 miles, there are **more than thirty-six** colleges and universities in neighboring states that offer programs for a DPT degree including:

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[6] American Physical Therapy Association (APTA). Workforce Analysis - A Report From the American Physical Therapy Association, December 2020. https://www.apta.org/contentassets/5997bfa5c8504df789fe4f1c01a717eb/apta-workforce-analysis-2020.pdf (accessed 12 June 2023).

[7] Maryland State Plan for Higher Education. https://mhec.maryland.gov/Pages/2021-2025-Maryland-State-Plan-for-Higher-Education.aspx (accessed 12 June 2023).

Institution**	Degree	IPEDS*+	CIP
University of Delaware	DPT	130943	51.2308
West Virginia University	DPT	238032	51.2308
Virginia Commonwealth University	DPT	234030	51.2308
University of Lynchburg	DPT	232609	51.2308
Shenandoah University	DPT	233541	51.2308
Old Dominion University	DPT	232982	51.2308
Marymount University	DPT	232706	51.2308
Mary Baldwin University	DPT	232672	51.2308
Hampton University	DPT	232265	51.2308
Alvernia University	DPT	210775	51.2308
Arcadia University	DPT	211088	51.2308
Arcadia University – Expansion	DPT	211088	51.2308
Chatham University	DPT	211556	51.2308
DeSales University	DPT	210739	51.2308
Drexel University	DPT	212054	51.2308
Duquesne University	DPT	212106	51.2308
Lebanon Valley College	DPT	213507	51.2308
Messiah University	DPT	213996	51.2308
Misericordia University	DPT	214069	51.2308
Neumann University	DPT	214272	51.2308
Saint Francis University	DPT	215743	51.2308
Saint Joseph's University	DPT	215770	51.2308
Slippery Rock University of Pennsylvania	DPT	216038	51.2308
Temple University	DPT	216339	51.2308
Thomas Jefferson University	DPT	216366	51.2308
University of Pittsburgh	DPT	215293	51.2308
University of Pittsburgh - Expansion	DPT	215293	51.2308
University of Scranton	DPT	215929	51.2308
Widener University	DPT	216852	51.2308
Howard University	DPT	131520	51.2308
George Washington University	DPT	131469	51.2308
Kean University	DPT	185262	51.2308
Rutgers, Newark, NJ	DPT	186399	51.2308
Rutgers, Blackwood, NJ	DPT	186380	51.2308
Seton Hall University	DPT	186584	51.2308
Stockton University	DPT	186876	51.2308

** https://aptaapps.apta.org/accreditedschoolsdirectory/captedirectory.aspx (accessed 07 June 2023).

* Integrated Postsecondary Education Data System (IPEDS) replaced the Higher Education General Information Survey (HEGIS) in 1986. https://nces.ed.gov/StatProg/handbook/pdf/ipeds.pdf (accessed 05 January 2023).

+ https://nces.ed.gov/i peds/find-your-college (accessed 05 January 2023).

The Doctor of Physical Therapy curriculum, at the University of Maryland School of Medicine (UMSOM), is designed to be completed in two years and 8 months (126 weeks) with the goal to prepare physical therapy students to function as independent entry-level practitioners upon graduation. The proposed DPT program for Johns Hopkins University (JHU) has a duplicate timeline and will inherently have duplicative objectives based off the same Commission on Accreditation in Physical Therapy Education (CAPTE) requirements[8] for all DPT programs, therefore it "does not expand occupational and professional needs relative to upgrading vocational/technical skills".

According to the 2021-2022 Applicant Data Report[9] from the Physical Therapist Centralized Application Service (PTCAS), a service of the American Physical Therapy Association (APTA) which allows DPT applications to apply to multiple programs with only one application, **27 new programs** joined PTCAS in the 2021-22 application cycle for a total of 284 CAPTE accredited programs (see tables below). This is an increase of 20% more programs than in the 2017-2018 cycle yet the number of applications since 2018 has not significantly increased. For the 2022-23 cycle, PTCAS is reporting a 16.96% decrease in verified applications and a 5.31% in verified applicants.[10]

2021-2022 Applicant Data Report – Tables 1 and 2

Table 1. PTCAS Program Participation Trends

	2017-18	2018-19	2019-20	2020-21	2021-22
Total # of Programs in PTCAS	236	240	249	257	284
Total # of Programs New to PTCAS This Cycle	14	4	9	8	27
Total # of Programs Eligible to Be in PTCAS	260	264	267	274	296
% Participation in PTCAS	90.8%	90.9%	93.3%	93.8%	96.0%

Table 2. PTCAS Volume Trend

Cycle	# PTCAS Applications	% Change	# PTCAS Applicants	% Change	Applications to Applicant Ratio	# Accepted Applicants	Accept Rate
2008-09	24,293		6,112		4.0	3,197	52.31%
2009-10	40,566	67.0%	9,297	52.1%	4.4	4,805	51.68%
2010-11	56,859	40.2%	11,604	24.8%	4.9	5,943	51.22%
2011-12	73,917	30.0%	13,462	16.0%	5.5	6,684	49.65%
2012-13	87,235	18.0%	15,616	16.0%	5.6	7,177	45.96%
2013-14	96,264	10.4%	16,828	7.8%	5.7	7,722	45.89%
2014-15	104,579	8.6%	17,587	4.5%	5.9	8,214	46.70%
2015-16	114,027	9.0%	18,475	5.0%	6.2	9,227	49.94%
2016-17	118,620	4.0%	19,025	3.0%	6.2	9,707	51.02%
2017-18	112,373	-5.3%	18,359	-3.5%	6.1	10,393	56.61%
2018-19	98,773	-12.1%	17,834	-2.9%	5.5	10,578	59.31%
2019-20	92,225	-6.6%	17,843	0.1%	5.2	11,566	64.82%
2020-21	97,786	6.0%	17,806	-0.2%	5.5	11,815	66.35%
2021-22	94,977	-2.9%	17,862	0.3%	5.3	12,708	71.15%

[8] CAPTE Accreditation Resource Documents. https://www.capteonline.org/about-capte/policies-and-procedures (accessed 05 January 2023).

[9] APTA PTCAS 2021-2022 Applicant Data Report. https://nam11.safelinks.protection.outlook.com/?url=http%3A%2F%2Fapta.informz.net%2Fz%2FcjUucD9taT0xMTA5OTM0MCZwPTEmdT0xMTcwNjczMjgwJmxpPTEwMjQ4ODU0NA%2Findex.html&data=05%7C01%7CDBethke%40som.umaryland.edu%7Cd4f4400f057b46af74c408db6688a10b%7C717009a620de461a88940312a395cac9%7C0%7C0%7C638216509234344449%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=igJGJqrcJxVVJNObvJLlf0welSVJXtaoy66SxEkJLzU%3D&reserved=0 (accessed 06 June 2023).

[10] American Physical Therapy Association, Physical Therapist Centralized Application Service (PTCAS) email dated 06 June 2023, "PTCAS 2023-24 is Live". (accessed 15 June 2023).

Incorporated in 2014, the American Council of Academic Physical Therapy (ACAPT) is a "not-for-profit association dedicated to excellence in physical therapist education programs as a whole and who's core purpose is to lead physical therapy in the pursuit of academic excellence" and includes membership from about 95% of all U.S.-accredited physical therapist programs. Following the APTA's 2020 Physical Therapy Workforce Analysis[6], ACAPT expressed their concerns regarding the increasing supply of physical therapists and suggested not to develop new education programs or expand class sizes in current programs. However, in a written statement from the American Council of Academic Physical Therapy (ACAPT) on March 2, 2023, they clarified that while ACAPT takes no position on the development or limitation of DPT programs, the retraction of their statement was not "due to any change in circumstances in the physical therapy field". The 2022 article titled, "Storm Clouds on the Horizon: The 3 Perils of Unconstrained Academic Growth in Physical Therapist Education", published in the Physical Therapy and Rehabilitation Journal (Deusinger et al.)[11], supports the concern that the growing number of new Doctor of Physical Therapy programs and expansion of existing programs is not in alignment with growth patterns in the profession and will fuel the oversupply in the workforce. This Point of View article, authored by faculty members of Washington University in St. Louis and the University of Nevada, suggests slowing the development of new programs and expansion of existing programs in order to balance the workforce supply and demand. This is the number one proactive strategy suggested by the authors to avoid negative consequences in academic and workforce growth:

Table 1. Proactive Survival Strategies for Academic Physical Therapy[a]

Peril	Survival Aim	Survival Strategy	Projected Impact
Peril 1: workforce supply and demand imbalance	Balance the supply and demands of PTs in the workforce	Slow or halt the growth of new and expansion DPT programs as workplace dynamics are further analyzed and adjusted	Reassessment of the rationale for programmatic growth in the face of perils in the higher education and workplace landscapes
		Adopt profession-wide strategic plan for projecting supply and demand using models that recognize entrance of graduates from existing and planned programs, career shifts within the profession and contemporary attrition patterns Establish an interdisciplinary advisory committee to provide advisement to institutions seeking to develop or expand DPT programs	Development of collaborative action that intentionally balances the growth of new and expansion DPT programs with an imperative to preserve opportunities for practitioner employment and career stability as workplace dynamics adjust Robust and early analysis of the resource implications associated with program development, expansion, and sustainability of DPT programs to balance the opportunities and perils of investment under current economic conditions
		Create opportunities to interface with higher education leadership groups (eg, presidents, provosts, deans) regarding the current supply and demand landscape	Increased institutional appreciation of the type and scope of investment and accrued obligations associated with development of DPT education in the face of workforce uncertainty, supply/demand imbalance, and debt accrual during professional education
		Seek widespread agreement to voluntarily decrease the size of cohorts in existing and developing programs to fit current workforce projections	Potential to slow the rapid growth in DPT program size and numbers in a new culture of inter-institutional collaboration among academic physical therapists
		Test options to combine existing programs to optimize faculty talent and institutional costs	Reduction of institutional pressure to increase class size in any single institution with potential to share costs of instruction across institutional boundaries
		Advance advocacy for equitable health care reimbursement from federal, state and private sources to ensure retention in the profession	Increased recognition of the value of and fair reimbursement for PT services to advance the demand for PTs by employers

Deusinger SS, Landers MR. "Storm Clouds on the Horizon: The 3 Perils of Unconstrained Academic Growth in Physical Therapist Education", Physical Therapy and Rehabilitation Journal, 2022;102:1-6. https://doi.org/10.1093/ptj/pzac046

An additional perspective article by Gordon, et al., 2022[12] titled, "**On** "Storm Clouds on the Horizon: The 3 Perils of Unconstrained Academic Growth in Physical Therapist Education." Deusinger SS, Landers MR. *Phys Ther.* 2022;102:pzac046." further supports this concern and predicts an economic bubble in which the excess of new DPT programs is unstainable. Gordon states, "We wholeheartedly agree with Deusinger and

[11] Deusinger SS, Landers MR. Storm Clouds on the Horizon: The 3 Perils of Unconstrained Academic Growth in Physical Therapist Education. *Physical Therapy and Rehabilitation Journal*, 2022;102:1-6. https://doi.org/10.1093/ptj/pzac046 (accessed 10 January 2023).

[12] Gordon J and Tilson JK. On "Storm Clouds on the Horizon: The 3 Perils of Unconstrained Academic Growth in Physical Therapist Education." Deusinger SS, Landers MR. Phys Ther. 2022;102:pzac046. *Physical Therapy and Rehabilitation Journal*, 2022; Volume 102, Issue 11, November 2022, pzac127, https://doi.org/10.1093/ptj/pzac127 (accessed 10 January 2023).

Landers[10] that the current proliferation of new doctor of physical therapy (DPT) programs will likely lead to damaging consequences for the collective enterprise of academic physical therapy as well as for the students and patients it exists to serve." Statistics provided in the article from CAPTE indicate the number of physical therapist education programs in the United States increased by 75% (from 118 to 205) from 1989 to 2002. By 1997, there was a reduction in demand for physical therapists and "the applicant pool plummeted by 74%, from an average of 342 applicants per program in 1995 to 88 in 2002. Total enrollment in US physical therapist education programs dropped by 30% from 1997 to 2003. Many programs were unable to fill their classes." An additional article referring to ACAPT's concerns regarding adding new physical therapy programs is Gagnon, et al. 2022[13] titled, "Doctor of Physical Therapy Education in a Hybrid Learning Environment: A Case Report" in which Gagnon (the Johns Hopkins School of Medicine founding Director of the DPT program) states, "there is uncertainty about future physical therapy workforce demand".

Shortage of Qualified Faculty

The Doctorate in Physical Therapy academic program, established in 2001 at UMSOM, is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) and is currently accredited through December of 2027. This commission, which is nationally recognized by the US Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA), assures the quality of education and grants specialized accreditation status to qualified entry-level education programs for physical therapists. Requirements for maintaining such levels of excellence include at least 50% of the core faculty hold academic doctoral degrees for both the current and projected composition, as indicated in the CAPTE Standards and Required Elements for Accreditation of Physical Therapist Education Programs.[14] Additional physical therapy programs will contribute to difficulties, nationally, in identifying qualified faculty with post-professional doctoral degrees required to teach in DPT programs.

As indicated by Hinman et al.[15], the most frequently cited CAPTE criteria is related to the qualifications of the program leadership. One reason, indicated by individuals who had directed physical therapy programs, for leaving their administrative positions included inability to hire or retain adequate faculty to operate the program. Further supporting the recruitment challenge, Arena R, et al.[16], indicates that there is a shortage of physical therapy faculty with an advanced doctoral degree to meet accreditation criteria, which is a primary concern for physical therapy programs. Childs et al.[17], fundamentally agrees with the American Council of Academic Physical Therapy (ACAPT), which supports academic institutions to strive for excellence in physical therapist education, that a shortage of qualified faculty could potentially pose a serious threat to physical therapy education programs.

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[13] Gagnon, K. et al. Doctor of Physical Therapy Education in a Hybrid Learning Environment: A Case Report. *Physical Therapy and Rehabilitation Journal*, 2022; Volume 102, 1-8. https://academic.oup.com/ptj/article/102/8/pzac074/6604585

[14] Commission on Accreditation in Physical Therapy Education (CAPTE). Accreditation Handbook. https://www.capteonline.org/about-capte/policies-and-procedures/accreditation-handbook (accessed 05 January 2023).

[15] Hinman M, Peel C, Price E. Leadership retention in physical therapy education programs. *JOPTE*. 2014; 28(1); 39-44. DOI:10.1097/00001416-201410000-00007 (accessed 06 January 2023).

[16] Arena R, et al. Integrated approaches to physical therapy education: a new comprehensive model from the University of Illinois Chicago. *Physiotherapy Theory and Practice*. 2017, 33(5); 353-360. DOI: 10.1080/09593985.2017.1305471 (accessed 06 January 2023).

[17] Childs JD, Benz LN, Arellano A, Briggs AA, Walker MJ. (15 October 2021). Challenging Assumptions About the Future Supply and Demand of Physical Therapists in the United States. *Physical Therapy* 2022, 102:1-5, https://doi.org/10.1093/ptj/pzab239 (accessed 04 January 2023).

In the past three years, the UMSOM, Department of Physical Therapy and Rehabilitation Science, has conducted seven national searches and faced challenges identifying qualified faculty candidates. A national search to fill six Assistant Professor, non-tenured track, vacancies produced a total of 55 applicants, only 14 of which were qualified candidates. A national search to fill an Assistant Professor, tenure-track, position resulted in six applicants, resulting in only two qualified candidates. It is important to note that the pool of applicants are employed by other accredited DPT programs around the nation and, in joining UMSOM's DPT program or JHU's DPT program, contributes to the systemic problem of an unprecedented shortage of qualified faculty. The UMSOM's DPT program has experienced this firsthand with the loss of at least six core faculty members that joined another DPT program in the region. In addition to core faculty, the UMSOM DPT program utilizes associate adjunct faculty to enhance the education of DPT students in expert content. These associate adjunct faculty are local to the region and vital to curriculum delivery. The hybrid JHU DPT program application proposes a similar model and plans to hire adjunct faculty "to fill specialized teaching needs to facilitate **onsite** lab instruction".

In earlier decisions (9/21/21 and 5/10/23), the Maryland Higher Education Commission documented "that the current shortage of qualified faculty would be exacerbated by adding an additional program" recognizing the CAPTE requirement of at least 50% of DPT program faculty must have a PhD or equivalent academic doctoral degree and that "adding another program in Maryland will increase competition for the limited pool of qualified faculty without creating an additional pipeline of future faculty members". This finding has not substantially changed.

COMAR 13B.02.03.27 - Unreasonable program duplication which would cause demonstrable harm to another institution.

Duplicative Existing Program

The University of Maryland School of Medicine (UMSOM), Department of Physical Therapy and Rehabilitation Science (PTRS), has been preparing individuals to become licensed physical therapists for 67 years. Degrees awarded for this physical therapy training have evolved as the profession has matured from BSPT in 1956, to MPT (1991- 2004), to Doctor of Physical Therapy (DPT) in 2001. As with all DPT programs, the UMSOM DPT program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE). Recognized by the US Department of Education (USDE) and the Council for Higher Education Accreditation (CHEA), CAPTE is the only accreditation agency documented to accredit entry-level physical therapist programs. Given CAPTE requirements[4], the proposed curriculum for the DPT program at Johns Hopkins University is similar to the DPT Program's curriculum at the UMSOM, as indicated below:

JHU DPT Program	UMSOM DPT Course
No equivalent.	**DPTE 511 Basic Sciences I** provides participants with comprehensive regional instruction of **human anatomy** through lectures, gross **cadaver dissection**, small group discussion, surface anatomy and clinical correlation. The block will be supported via Blackboard to provide access to course information and lecture materials. Instruction will facilitate discussion of **normal human anatomy** as it pertains to the following systems: musculoskeletal, nervous, endocrine, cardiovascular, pulmonary, gastrointestinal, genitourinary, and lymphatic. Discussion of normal anatomy across the lifespan will be emphasized when appropriate. Exposure to basic concepts of identifying anatomical structures in

	diagnostic images will enhance clinical relevance to this foundational science. Movement analysis utilizing anatomical rationale and the motor control framework will be integrated throughout the course. Clinical relevance will be introduced during synchronous and asynchronous lectures, laboratory sessions, small group discussions, group work, surface anatomy, and clinical correlation presentations. [10 SCH]
Movement Science I focuses on fundamental principles of motor control, motor learning, and motor development, with an emphasis on task analysis and the body systems underlying these concepts. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.801) [6 credit hours]	**DPTE 511 Basic Sciences I** provides participants with comprehensive regional instruction of human anatomy through lectures, gross cadaver dissection, small group discussion, surface anatomy and clinical correlation. The block will be supported via Blackboard to provide access to course information and lecture materials. Instruction will facilitate discussion of normal human anatomy as it pertains to the following **systems: musculoskeletal, nervous**, **endocrine, cardiovascular, pulmonary, gastrointestinal, genitourinary, and lymphatic.** Discussion of normal anatomy across the lifespan will be emphasized when appropriate. Exposure to basic concepts of identifying anatomical structures in diagnostic images will enhance clinical relevance to this foundational science. **Movement analysis** utilizing anatomical rationale and the **motor control framework** will be integrated throughout the course. Clinical relevance will be introduced during **synchronous and asynchronous lectures, laboratory sessions, small group discussions, group work,** surface anatomy, and clinical correlation presentations. [10 SCH] **DPTE 514 Basic Sciences III** integrates and consolidates the foundations of movement sciences and biophysical sciences **pertaining to human function across the lifespan. [includes pediatrics to geriatrics]** It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of biomechanical and patho-mechanical correlates and **motor behavior theories to the analyses of movements in health and pathology** and use this knowledge to develop basic screening, evaluation, assessment and performance measures and skills. Students will develop the basic skills of documenting and reporting the findings of the studied evaluation measures and intervention outcomes. The student will learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary,

	vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. Students learn to evaluate balance and mobility as well as perform mobility training interventions (gait, wheelchair, bed mobility, and transfers] with an emphasis on safety. Students learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens. Synchronous and asynchronous lectures, laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material presented in the block will be measured through performance on written and practical examinations. The last two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this Block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [14 SCH]
Health Equity and Access provides an understanding of the social context of health care, with an emphasis on epigenetics, health disparities, community health, and disability studies. This course uses a combination of synchronous and asynchronous online learning, including casedbased learning, small and large group discussion, and team-based learning (ME.716.821) [4 credit hours]	**DPTE 515 Professional Issues II** will prepare the student to communicate and interact with other health care providers, third party payers, patients, clients, and caregivers. Educational experiences will include presentations by professionals in related health care disciplines, academic, and research settings. Students learn about the ICF model and how to use this model to organize patient information. The role of the national organization in physical therapy practice and the practice act will be examined. Exercises promoting advocacy, **disability awareness**, cultural awareness, and ethical decision-making will provide the student with a foundation to form clinical decisions and conduct themselves professionally with other healthcare professionals, patients, clients, and caregivers. Quality improvement and risk management related to physical therapy practice is explored in this block. Students will learn about the US and global healthcare systems. [3 SCH]

	DPTE 513 Basic Sciences II uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. **Genetics** is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH] **DPTE 520 Medical Issues** provides the student with knowledge of common medical and surgical conditions that present throughout the lifespan. The emphasis is the examination, evaluation, interventions, and differential diagnosis for patients who are medically complex in all treatment settings. This block includes examination, differential diagnosis, evaluation, and interventions of cardiovascular and pulmonary conditions. Additionally, the student will be provided with an integrated framework of the interplay of vascular function/integrity upon integumentary hygiene and the maintenance of a viable limb. A portion of this block will be dedicated to the comprehensive understanding of the etiology and management of congenital, traumatic and acquired pathological amputations. Clinical wound management practices will be outlined for multiple types of open wounds, burns and common dermatologic disorders. Examination and interventions for lymphatic system problems is included in this block. The hospital clinical practice setting will serve as the introductory

	benchmark for instruction and will highlight, compare and contrast the variety of settings reflective of patient acuity – emergency room, intensive care unit, transitional care unit and general medical/surgical units. Instruction will then be elaborated beyond the hospital setting to foster the critical thinking and clinical problem-solving skills necessary for effective and efficient functioning in the role of primary clinical care provider in both inpatient and outpatient settings. Synchronous and asynchronous lectures, laboratory exercises, clinical visits and group work will assist students to master clinically relevant information. Practical learning experiences will include analysis of laboratory and medical/surgical data, patient co-morbidities/risk factors, resource availability, information gained through interdisciplinary professional interactions, and exercises that address health care/delivery to **underserved populations. Health literacy and social determinants of health** are discussed in the context of a variety of group work and case-based simulation lab activities. Students will also gain exposure to evidence-based practice through interactive dialogue in research seminars. [14 SCH]
Professional Formation I provides learners with the opportunity to begin developing their professional identity, with an emphasis on the roles of the physical therapist, professional ethics and values, communication skills, and cultural humility. This course uses a combination of synchronous and asynchronous online learning, including cased-based learning, small and large group discussion, reflection, individual and group projects, and team-based learning. (ME.716.841) [4 credit hours]	**DPTE 512** Professional Issues I will be focused on the orientation of the student to the Department of Physical Therapy and Rehabilitation Science as well as the American Physical Therapy Association policies and procedures. This block is designed to ensure student compliance with all departmental, university, and professional regulations and guidelines for conduct. Lectures and discussions about the Maryland Physical Therapy Practice Act and the Guide to Physical Therapy Practice will provide the opportunity for the student to examine the **ethical, legal, and professional issues** surrounding physical therapy practice and conduct as a student in this program. The importance of cultural awareness, **communication and feedback**, and the educator role of the physical therapist will be emphasized. Evidence-based practice and research will be introduced in this Block. Professional behavior expectations and standards in the student role, and as a PT professional will be emphasized. [3 SCH] **DPTE 515 Professional Issues II** will prepare the student to communicate and interact with other health care providers, third party payers, patients, clients, and caregivers. Educational experiences will include presentations by professionals in related health care disciplines, academic, and research settings. Students learn about the ICF model and how to use this model to organize patient information. The role of the national

	organization in physical therapy practice and the practice act will be examined. Exercises promoting advocacy, **disability awareness**, cultural awareness, and ethical decision-making will provide the student with a foundation to form clinical decisions and conduct themselves professionally with other healthcare professionals, patients, clients, and caregivers. Quality improvement and risk management related to physical therapy practice is explored in this block. Students will learn about the US and global healthcare systems. [3 SCH]
Foundations of Patient/Client Management focuses on fundamental principles of patient care, with an emphasis on population-based health, prevention, health promotion, wellness, and behavior science. This course introduces the ICF to describe body functions and structures, activities, participation, and contextual factors related to movement. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.860) [4 credit hours]	**DPTE 511 Basic Sciences I** provides participants with comprehensive regional instruction of human anatomy through lectures, gross cadaver dissection, small group discussion, surface anatomy and clinical correlation. The block will be supported via Blackboard to provide access to course information and lecture materials. Instruction will facilitate discussion of normal human anatomy as it pertains to the following **systems: musculoskeletal, nervous**, **endocrine, cardiovascular, pulmonary, gastrointestinal, genitourinary, and lymphatic.** Discussion of normal anatomy across the lifespan will be emphasized when appropriate. Exposure to basic concepts of identifying anatomical structures in diagnostic images will enhance clinical relevance to this foundational science. **Movement analysis** utilizing anatomical rationale and the **motor control framework** will be integrated throughout the course. Clinical relevance will be introduced during **synchronous and asynchronous lectures, laboratory sessions, small group discussions, group work,** surface anatomy, and clinical correlation presentations. [10 SCH] **DPTE 514 Basic Sciences III** integrates and consolidates the foundations of movement sciences and biophysical sciences pertaining to human function across the lifespan. [includes pediatrics to geriatrics] It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of biomechanical and patho-mechanical correlates and motor behavior theories to the analyses of movements in health and pathology and use this knowledge to **develop basic screening, evaluation, assessment and performance measures and skills.** Students will develop the **basic skills of documenting and reporting the findings** of the studied evaluation measures and intervention outcomes. The student will

	learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary, vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. Students learn to evaluate balance and mobility as well as perform mobility training interventions (gait, wheelchair, bed mobility, and transfers] with an emphasis on safety. Students learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens. Synchronous and asynchronous lectures, laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material presented in the block will be measured through performance on written and practical examinations. The last two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [14 SCH]
Movement Science II focuses on fundamental principles of motion assessment and analysis, exercise prescription, and gait, with an emphasis on applied anatomy, kinesiology, and biomechanics. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.802) [6 credits]	**DPTE 514 Basic Sciences III** integrates and consolidates **the foundations of movement sciences** and biophysical sciences pertaining to human function across the lifespan. [includes pediatrics to geriatrics] It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of **biomechanical and patho-mechanical correlates and motor behavior theories to the analyses of movements in health and pathology** and use this knowledge to develop basic screening, evaluation, assessment and performance measures and skills. Students will develop the basic skills of documenting and reporting the findings of the studied evaluation measures and intervention outcomes. The student will learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and

	rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary, vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. **Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations.** Students learn to evaluate balance and mobility as well as perform mobility training interventions (**gait**, wheelchair, bed mobility, and transfers] with an emphasis on safety. Students learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens. Synchronous and asynchronous lectures, laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material presented in the block will be measured through performance on written and practical examinations. The last two modules of the UMSOM Foundations of Interprofessional Education and Practice course are embedded in this Block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [14 SCH]
Professional Formation II provides learners with the opportunity to develop their skills as a member of a health care team, with an emphasis on team science, interprofessional practice, and personal leadership. This course uses a combination of synchronous and asynchronous online learning, including cased-based learning, small and large group discussion, reflection, individual and group projects, and team-based learning. (ME.716.842) [3 credit hours]	**DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical

	decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The **first two modules of the UMB Foundations of Interprofessional Education and Practice** course are embedded in this block. Students work with an **interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system**. [15 SCH] **DPTE 514 Basic Sciences III** integrates and consolidates the foundations of movement sciences and biophysical sciences pertaining to human function across the lifespan. [includes pediatrics to geriatrics] It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of biomechanical and patho-mechanical correlates and motor behavior theories to the analyses of movements in health and pathology and use this knowledge to develop basic screening, evaluation, assessment and performance measures and skills. Students will develop the basic skills of documenting and reporting the findings of the studied evaluation measures and intervention outcomes. The student will learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary, vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. Students learn to evaluate balance and mobility as well as perform mobility training interventions (gait, wheelchair, bed mobility, and transfers] with an emphasis on safety. Students learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens. Synchronous and asynchronous lectures, laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material

	presented in the block will be measured through performance on written and practical examinations. The **last two modules of the UMSOM Foundations of Interprofessional Education and Practice course** are embedded in this Block. **Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system**. [14 SCH] **DPTE 526 Integrated Clinical Experience** provides students the opportunity to **practice their clinical skills and professional interactions** in a **clinical environment under direct supervision** of a clinical instructor. Students will have the opportunity to apply didactic knowledge, develop professional behaviors, and practice hands-on skills. In addition, there are on-line and in-class educational modules/meetings that support the clinical education curriculum. Students participate in an **interprofessional experience with PT, OT, Speech, and Audiology students**. Students are also required to perform a Professional Practice Opportunity (PPO) project during this block. [1 SCH]
Evidence-based Practice provides students with an opportunity to develop critical inquiry skills, with an emphasis on applied statistics and use of evidence for clinical decision-making. This course uses a combination of synchronous and asynchronous online learning, including casedbased learning, small and large group discussion, reflection, individual and group projects, and team-based learning. (ME.716.851) [3 credit hours]	**DPTE 512** Professional Issues I will be focused on the orientation of the student to the Department of Physical Therapy and Rehabilitation Science as well as the American Physical Therapy Association policies and procedures. This block is designed to ensure student compliance with all departmental, university, and professional regulations and guidelines for conduct. Lectures and discussions about the Maryland Physical Therapy Practice Act and the Guide to Physical Therapy Practice will provide the opportunity for the student to examine the ethical, legal, and professional issues surrounding physical therapy practice and conduct as a student in this program. The importance of cultural awareness, communication and feedback, and the educator role of the physical therapist will be emphasized. **Evidence-based practice and research will be introduced** in this block. Professional behavior expectations and standards in the student role, and as a PT professional will be emphasized. [3 SCH] Students participate in **research seminars in DPTE 520, 522, 524, 525, 527 and the use of evidence to drive clinical practice is emphasized in all didactic clinical blocks (DPTE 513, 520, 522, 524, 525, 527).**

Management of Musculoskeletal Health Conditions I involves application and integration of knowledge of the movement system and ICF framework to develop skills in examination/screening, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with musculoskeletal health conditions affecting upper and/or lower extremities. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning; including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning (ME.716.861) [6 credit hours]	**DPTE 522** Musculoskeletal I addresses **musculoskeletal injuries and diseases of the lower extremities**, pelvis, and lumbar spine. This block includes examination, **differential diagnosis, diagnostic imaging, and interventions for musculoskeletal conditions**. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, in addition to small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as, appropriately manage persons with musculoskeletal injuries and diseases**.** Pain science is included in this block. Lectures, seminars, and weekly laboratory sessions will assist the student to understand the evidence supporting the concepts presented during the block and integrate these concepts into independent practice. [9 SCH] **DPTE 525** Musculoskeletal II addresses **orthopedic and other musculoskeletal injuries and disease**s affecting the thoracic spine, ribs, cervical spine, **upper extremities,** and TMJ. This block includes examination, **differential diagnosis, diagnostic imaging, and interventions for musculoskeletal conditions**. Much of the information in this block will complement material presented in Musculoskeletal Issues I. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, and small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as appropriately manage persons with orthopedic injuries and diseases. The design of the block **incorporates suggestions from the Guide to Physical Therapist Practice**, and the required readings further reinforce this orientation. Laboratory sessions and formal discussions of evidence-based practice will assist you to understand the evidence supporting the concepts presented during the block and empower you to integrate these concepts into independent practice. Students engage in active learning techniques to help synthesize and integrate information gained throughout the didactic phase of the curriculum. Emphasis is on clinical problem-solving as well as prioritization and use of evidence-based strategies. This facilitates

	determination of student readiness to proceed to the full-time clinical internship phase of the curriculum. This course also includes content related to physical therapy practice management. Students should integrate this information to their clinical decision-making and professional interactions with other health care providers, third party payers, patients, clients, and their caregivers. Learning experiences will include formal presentations, on-line learning, guest lectures, case scenarios, and small group discussions and activities. By the end of this block, students should understand topics including billing, reimbursement, and applying and interviewing for a job. [8 SCH] **DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the **major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems**. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH]
Movement Science III focuses on fundamental principles of neuroscience and sensorimotor aspects of movement, with an emphasis on applied neuroscience and pain science. This course uses a	**DPTE 522** Musculoskeletal I addresses **musculoskeletal injuries and diseases of the lower extremities**, pelvis, and lumbar spine. This block includes examination, **differential diagnosis, diagnostic imaging, and**

combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.803) [4 credit hours]	**interventions for musculoskeletal conditions**. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, in addition to small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as, appropriately manage persons with musculoskeletal injuries and diseases**. Pain science is included in this block.** Lectures, seminars, and weekly laboratory sessions will assist the student to understand the evidence supporting the concepts presented during the block and integrate these concepts into independent practice. [9 SCH] **DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the **physiology and related pathology of the major systems relating to neuroscience**, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH]

Professional Formation III provides learners with the opportunity to build their professional skills, with an emphasis on practice management, leadership, personal finance, and supervision of support personnel. This course uses a combination of synchronous and asynchronous online learning, including cased-based learning, small and large group discussion, reflection, individual and group projects, and team-based learning. (ME.716.842) [3 credit hours]	**DPTE 525** Musculoskeletal II addresses **orthopedic and other musculoskeletal injuries and disease**s affecting the thoracic spine, ribs, cervical spine, **upper extremities,** and TMJ. This block includes examination, **differential diagnosis, diagnostic imaging, and interventions for musculoskeletal conditions**. Much of the information in this block will complement material presented in Musculoskeletal Issues I. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, and small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as appropriately manage persons with orthopedic injuries and diseases. The design of the block incorporates suggestions from the Guide to Physical Therapist Practice, and the required readings further reinforce this orientation. Laboratory sessions and formal discussions of evidence-based practice will assist you to understand the evidence supporting the concepts presented during the block and empower you to integrate these concepts into independent practice. Students engage in active learning techniques to help synthesize and integrate information gained throughout the didactic phase of the curriculum. Emphasis is on clinical problem-solving as well as prioritization and use of evidence-based strategies. This facilitates determination of student readiness to proceed to the full-time clinical internship phase of the curriculum. This course also includes content related to **physical therapy practice management**. Students should **integrate this information to their clinical decision-making and professional interactions with other health care providers, third party payers, patients, clients, and their caregivers**. Learning experiences will include formal presentations, on-line learning, guest lectures, case scenarios, and small group discussions and activities. By the end of this block, students should understand topics including **billing, reimbursement**, and applying and interviewing for a job. [8 SCH]
Management of Musculoskeletal Health Conditions II involves application and integration of knowledge of the movement system and ICF framework to develop skills in	**DPTE 522** Musculoskeletal I addresses **musculoskeletal injuries and diseases of the** lower extremities, **pelvis, and lumbar spine**. This block includes examination, **differential diagnosis, diagnostic imaging, and**

examination/screening, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with musculoskeletal health conditions affecting the head, neck, and/or spine. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.862) [5 credit hours]	**interventions for musculoskeletal conditions**. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, in addition to small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as, appropriately manage persons with musculoskeletal injuries and diseases**.** Lectures, seminars, and weekly laboratory sessions will assist the student to understand the evidence supporting the concepts presented during the block and integrate these concepts into independent practice. [9 SCH] **DPTE 525** Musculoskeletal II addresses **orthopedic and other musculoskeletal injuries and disease**s affecting the **thoracic spine, ribs, cervical spine**, upper extremities, and **TMJ**. This block includes examination, **differential diagnosis, diagnostic imaging, and interventions for musculoskeletal conditions**. Much of the information in this block will complement material presented in Musculoskeletal Issues I. Learning experiences will include synchronous and asynchronous lectures, laboratory sessions, real and simulated patient cases, and small group discussions that focus on clinically relevant examination and management techniques of persons throughout the lifespan. Upon completing this block, the student should be able to critically examine, communicate, and effectively document the information gathered during the initial examination, as well as appropriately manage persons with orthopedic injuries and diseases. The design of the block **incorporates suggestions from the Guide to Physical Therapist Practice**, and the required readings further reinforce this orientation. Laboratory sessions and formal discussions of evidence-based practice will assist you to understand the evidence supporting the concepts presented during the block and empower you to integrate these concepts into independent practice. Students engage in active learning techniques to help synthesize and integrate information gained throughout the didactic phase of the curriculum. Emphasis is on clinical problem-solving as well as prioritization and use of evidence-based strategies. This facilitates determination of student readiness to proceed to the full-time clinical internship phase of the curriculum. This course also includes content related to physical therapy practice management. Students should integrate this information to their clinical decision-making and

	professional interactions with other health care providers, third party payers, patients, clients, and their caregivers. Learning experiences will include formal presentations, on-line learning, guest lectures, case scenarios, and small group discussions and activities. By the end of this block, students should understand topics including billing, reimbursement, and applying and interviewing for a job. [8 SCH] **DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the **major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems**. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH]
Movement Science IV focuses on cardiovascular response to movement and exercise, with an emphasis on applied physiology. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.804)	**DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems. A less in-depth discussion of the physiology and

[4 credit hours]	pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. **Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations.** The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH] **DPTE 514 Basic Sciences III** integrates and consolidates the foundations of movement sciences and biophysical sciences pertaining to human function across the lifespan. [includes pediatrics to geriatrics] It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of biomechanical and patho-mechanical correlates and motor behavior theories to the analyses of movements in health and pathology and use this knowledge to develop basic screening, evaluation, assessment and performance measures and skills. Students will develop the basic skills of documenting and reporting the findings of the studied evaluation measures and intervention outcomes. The student will learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary, vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. **Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations.** Students learn to evaluate balance and mobility as well as perform mobility training interventions (gait, wheelchair, bed mobility, and transfers] with an emphasis on safety. Students

	learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens. Synchronous and asynchronous lectures, laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material presented in the block will be measured through performance on written and practical examinations. The last two modules of the UMSOM Foundations of Interprofessional Education and Practice course are embedded in this Block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [14 SCH] **DPTE 520 Medical Issues** provides the student with knowledge of common medical and surgical conditions that present throughout the lifespan. The emphasis is the examination, evaluation, interventions, and differential diagnosis for patients who are medically complex in all treatment settings. This block includes examination, differential diagnosis, evaluation, and **interventions of cardiovascular and pulmonary conditions**. Additionally, the student will be provided with an integrated framework of the interplay of vascular function/integrity upon integumentary hygiene and the maintenance of a viable limb. A portion of this block will be dedicated to the comprehensive understanding of the etiology and management of congenital, traumatic and acquired pathological amputations. Clinical wound management practices will be outlined for multiple types of open wounds, burns and common dermatologic disorders. Examination and interventions for lymphatic system problems is included in this block. The hospital clinical practice setting will serve as the introductory benchmark for instruction and will highlight, compare and contrast the variety of settings reflective of patient acuity – emergency room, intensive care unit, transitional care unit and general medical/surgical units. Instruction will then be elaborated beyond the hospital setting to foster the critical thinking and clinical problem-solving skills necessary for effective and efficient functioning in the role of primary clinical care provider in both inpatient and outpatient settings. Synchronous and asynchronous lectures, laboratory exercises, clinical visits and group work will assist students to master clinically relevant

	information. Practical learning experiences will include analysis of laboratory and medical/surgical data, patient co-morbidities/risk factors, resource availability, information gained through interdisciplinary professional interactions, and exercises that address health care/delivery to underserved populations. Health literacy and social determinants of health are discussed in the context of a variety of group work and case-based simulation lab activities. Students will also gain exposure to evidence-based practice through interactive dialogue in research seminars. [14 SCH]
Health Systems provides an understanding of the structural context of health care, with an emphasis on infrastructure, finances, capacity, care processes, and quality improvement. This course uses a combination of synchronous and asynchronous online learning, including casedbased learning, small and large group discussion, and team-based learning (ME.716.822) [2 credit hours]	**DPTE 515 Professional Issues II** will prepare the student to communicate and interact with other health care providers, third party payers, patients, clients, and caregivers. Educational experiences will include presentations by professionals in related health care disciplines, academic, and research settings. Students learn about the ICF model and how to use this model to organize patient information. The role of the national organization in physical therapy practice and the practice act will be examined. Exercises promoting advocacy, disability awareness, cultural awareness, and ethical decision-making will provide the student with a foundation to form clinical decisions and conduct themselves professionally with other healthcare professionals, patients, clients, and caregivers. **Quality improvement** and risk management related to physical therapy practice is explored in this block. Students will learn about the **US and global healthcare systems.** [3 SCH]
Management of Cardiopulmonary Health Conditions involves application and integration of knowledge of the movement system and ICF framework to develop skills in examination, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with cardiopulmonary health conditions. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.864 pg. 25; ME.716.863 Appendix A)) [4 credit hours pg. 25; 6 credit hours pg. Appendix A]	**DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the **physiology and related pathology of the major systems** relating to neuroscience, **cardiopulmonary science**, musculoskeletal and integumentary science, including the **pharmacology associated with these systems.** A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students

	in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH] **DPTE 520 Medical Issues** provides the student with knowledge of common medical and surgical conditions that present throughout the lifespan. The emphasis is the examination, evaluation, interventions, and differential diagnosis for patients who are medically complex in all treatment settings. This block includes **examination, differential diagnosis, evaluation, and interventions of cardiovascular and pulmonary conditions**. Additionally, the student will be provided with an integrated framework of the interplay of vascular function/integrity upon integumentary hygiene and the maintenance of a viable limb. A portion of this block will be dedicated to the comprehensive understanding of the etiology and management of congenital, traumatic and acquired pathological amputations. Clinical wound management practices will be outlined for multiple types of open wounds, burns and common dermatologic disorders. Examination and interventions for lymphatic system problems is included in this block. The hospital clinical practice setting will serve as the introductory benchmark for instruction and will highlight, compare and contrast the variety of settings reflective of patient acuity – emergency room, intensive care unit, transitional care unit and general medical/surgical units. Instruction will then be elaborated beyond the hospital setting to foster the critical thinking and clinical problem-solving skills necessary for effective and efficient functioning in the role of primary clinical care provider in both inpatient and outpatient settings. Synchronous and asynchronous lectures, laboratory exercises, clinical visits and group work will assist students to master clinically relevant information. Practical learning experiences will include analysis of laboratory and medical/surgical data, patient co-morbidities/risk factors, resource availability, information gained through interdisciplinary professional interactions, and exercises that address health care/delivery to underserved populations. Health literacy and social determinants of health are discussed in the

	context of a variety of group work and case-based simulation lab activities. Students will also gain exposure to evidence-based practice through interactive dialogue in research seminars. [14 SCH]
Clinical Education I (ME. 716.900) Clinical Education I is the first full-time clinical experience. This supervised experience will span 8 weeks. [4 credit hours]	**DPTE 545** Full Time Clinical Experience I is the **first in a series of three full-time clinical experiences.** Students are provided the opportunity to apply didactic knowledge, develop professional behaviors, and practice patient/client management in a clinical setting. Students perform all aspects of the patient-client management model, including examination, evaluation, diagnosis, prognosis, and plan-of-care, documentation, delegation, legal and financial issues related to physical therapist practice. The clinical experience is **8 weeks** in length. [5 SCH]
Health Policy and Advocacy provides an understanding of the political context of health care, with an emphasis on regulatory and legislative issues, health policy, and advocacy. This course uses a combination of synchronous and asynchronous online learning, including cased-based learning, small and large group discussion, and team-based learning (ME.716.823) [3 credit hours]	**DPTE 514 Basic Sciences III** integrates and consolidates the foundations of movement sciences and biophysical sciences pertaining to human function across the lifespan. [includes pediatrics to geriatrics] It will serve as an interface between the previous basic science blocks and the clinical sciences blocks. Students will acquire knowledge in the application of biomechanical and patho-mechanical correlates and motor behavior theories to the analyses of movements in health and pathology and use this knowledge to develop basic screening, evaluation, assessment and performance measures and skills. Students will develop the basic skills of documenting and reporting the findings of the studied evaluation measures and intervention outcomes. The student will learn to describe, operate and apply skillfully various therapeutic technologies used in habilitation and rehabilitation of patients with musculoskeletal, neuromuscular, cardio-pulmonary, vascular, and integumentary deficits. Instruction will foster critical thinking and an evidence-based approach to problem solving skills necessary for developing effective and efficient independent clinicians. **Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations.** Students learn to evaluate balance and mobility as well as perform mobility training interventions (gait, wheelchair, bed mobility, and transfers] with an emphasis on safety. **Students learn about the advocacy process at both the local and national level. They participate in APTA Maryland Advocacy Day speaking to legislators and aides about issues important to physical therapy practice and the health of Maryland citizens**. Synchronous and asynchronous lectures,

	laboratory activities, numerous case presentations, group work, patient labs, offsite/virtual events, and team-based learning will be used in this block. Successful mastery of the material presented in the block will be measured through performance on written and practical examinations. The last two modules of the UMSOM Foundations of Interprofessional Education and Practice course are embedded in this Block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [14 SCH]
Capstone I provides learners with the opportunity to begin a mentored scholarly project. Learners will work collaboratively with peers and faculty to identify a project and create a plan for implementation and completion (ME.716.852) [2 credit hours]	There is no capstone project. Students participate in **research seminars in DPTE 520, 522, 524, 525, 527 and the use of evidence to drive clinical practice is emphasized in all didactic clinical blocks (DPTE 513, 520, 522, 524, 525, 527).**
Management of Neuromuscular Health Conditions involves application and integration of knowledge of the movement system and ICF framework to develop skills in examination, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with neuromuscular health conditions. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.864) [6 credit hours]	**DPTE 524 Neuromuscular I** covers the **advanced study of neurological disorders of the central, sympathetic, and peripheral nervous systems across the lifespan.** Cognition and perception are covered in this block. **Emphasis is placed on problem-solving, critical thinking, and integrating examination and intervention skills** taught in previous blocks. Students will also document and communicate their findings. Small group seminars will be used to help students identify and critique evidence to support clinical practice. Students will receive training in decision making to develop the skills necessary for independent practice. [9 SCH] **DPTE 527 Neuromuscular II** covers the advanced study of **examination, evaluation, and rehabilitation for individuals with neurological disorders of the central, sympathetic, and peripheral nervous system across the lifespan**. Students will continue to develop skills in establishing and executing a comprehensive plan of care for populations with neuromuscular pathologies. Block emphasis is on problem-solving, critical thinking, and **integrating the examination and intervention skills with new content and content covered in previous blocks.** Students will document clinical findings, interact with patient educators, communicate with peers and other health professionals. [8 SCH]

	DPTE 513 Basic Sciences II uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the physiology and related pathology of the **major systems relating to neuroscience, cardiopulmonary science, musculoskeletal and integumentary science, including the pharmacology associated with these systems**. A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH]
Management of Integumentary & Lymphatic Health Conditions involves application and integration of knowledge of the movement system and ICF framework to develop skills in examination, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with integumentary and lymphatic health conditions. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning.	**DPTE 520 Medical Issues** provides the student with knowledge of common medical and surgical conditions that present throughout the lifespan. The emphasis is the examination, evaluation, interventions, and differential diagnosis for patients who are medically complex in all treatment settings. This block includes examination, differential diagnosis, evaluation, and interventions of cardiovascular and pulmonary conditions. Additionally, the student will be provided with an integrated framework of the interplay of vascular function/integrity upon integumentary hygiene and the maintenance of a viable limb. A portion of this block will be dedicated to the comprehensive understanding of the etiology and management of congenital, traumatic and

(ME.716.865) [6 credit hours]	acquired pathological amputations. **Clinical wound management practices will be outlined for multiple types of open wounds, burns, and common dermatologic disorders. Examination and interventions for lymphatic system problems is included in this block.** The hospital clinical practice setting will serve as the introductory benchmark for instruction and will highlight, compare and contrast the variety of settings reflective of patient acuity – emergency room, intensive care unit, transitional care unit and general medical/surgical units. Instruction will then be elaborated beyond the hospital setting to foster the critical thinking and clinical problem-solving skills necessary for effective and efficient functioning in the role of primary clinical care provider in both inpatient and outpatient settings. Synchronous and asynchronous lectures, laboratory exercises, clinical visits and group work will assist students to master clinically relevant information. Practical learning experiences will include analysis of laboratory and medical/surgical data, patient co-morbidities/risk factors, resource availability, information gained through interdisciplinary professional interactions, and exercises that address health care/delivery to underserved populations. Health literacy and social determinants of health are discussed in the context of a variety of group work and case-based simulation lab activities. Students will also gain exposure to evidence-based practice through interactive dialogue in research seminars. [14 SCH] **DPTE 513 Basic Sciences II** uses an integrative biological and functional approach to studying the systems of the body across the lifespan. It accomplishes this through in-depth discussions of the **physiology and related pathology of the major systems** relating to neuroscience, **cardiopulmonary science**, musculoskeletal and integumentary science, including the **pharmacology associated with these systems.** A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and

	exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH]
Clinical Education II Clinical Education II is the second full-time clinical experience. This supervised experience will span 12 weeks. (ME.716.910) [6 credit hours]	**DPTE 546** Full Time Clinical Experience II is the **second full-time clinical experience.** Students are provided the opportunity to continue to apply their didactic knowledge, develop professional behaviors, and practice patient/client management in another clinical setting. Students perform all aspects of the patient-client management model, as described in DPTE 545. The clinical experience is **12 weeks** in length. [7 SCH]
Capstone II, learners will complete and present their capstone project at the DPT Program level. (ME.716.853) [2 credit hours]	There is no capstone project. Students participate in **research seminars in DPTE 520, 522, 524, 525, 527 and the use of evidence to drive clinical practice is emphasized in all didactic clinical blocks (DPTE 513, 520, 522, 524, 525, 527).**
Management of Health Conditions Across the Lifespan involves application and integration of knowledge of the movement system and ICF framework to develop skills in examination, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for pediatric patients and aging populations. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.866) [6 credit hours]	**DPTE 513 Basic Sciences II** uses an **integrative biological and functional approach to studying the systems of the body across the lifespan**. It accomplishes this through in-depth discussions of the **physiology and related pathology of the major systems** relating to neuroscience, **cardiopulmonary science**, musculoskeletal and integumentary science, including the **pharmacology associated with these systems.** A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and

	values & ethics in an evolving health care system. [15 SCH] **DPTE 513, 514, 520, 522, 524, 525, 527 integrate physical therapy examination, evaluation, diagnosis, prognosis, and intervention throughout the blocks across the lifespan. The emphasis is on movement and function. The ICF model provides a framework for students to organize patient data.** Patient types range from uncomplicated to complex with respect to medical conditions. Students develop treatment plans for a wide range of patients including complex patients with multiple comorbidities and varying social determinants of health. The students base their decisions on available evidence.
Management of Multi-System Health Conditions involves application and integration of knowledge of the movement system, ICF framework, and clinical sciences to develop skills in examination, evaluation, diagnosis/prognosis, and intervention – including pathology, pharmacology, diagnostic imaging, and differential diagnosis – for patients with complex health conditions. This course uses a combination of synchronous and asynchronous online learning, face-to-face lab instruction, and practice-based learning, including cased-based learning, small and large group discussion, psychomotor practice, and team-based learning. (ME.716.867] [5 credit hours]	**DPTE 513 Basic Sciences II** uses an **integrative biological and functional approach to studying the systems of the body across the lifespan**. It accomplishes this through in-depth discussions of the **physiology and related pathology of the major systems** relating to neuroscience, **cardiopulmonary science**, musculoskeletal and integumentary science, including the **pharmacology associated with these systems.** A less in-depth discussion of the physiology and pathology of other medical systems is included as well. Genetics is included in this block. Throughout the block there are laboratory experiences designed to reinforce and integrate key concepts presented during synchronous and asynchronous lectures, assignments, group work, clinical integration discussions, and clinical correlate sessions, all of which are intended to place the basic science material within a clinical context. These interactions are designed to aid students in developing interpersonal and foundational clinical decision-making skills. Exercise physiology, fundamentals of exercise training, exercise testing, and exercise prescription are discussed in relation to patient populations. The first two modules of the UMB Foundations of Interprofessional Education and Practice course are embedded in this block. Students work with an interprofessional team in a collaborative manner to complete assignments and learn about interprofessional teamwork, communication, roles & responsibilities, and values & ethics in an evolving health care system. [15 SCH] **DPTE 513, 514, 520, 522, 524, 525, 527 integrate physical therapy examination, evaluation, diagnosis,**

	prognosis, and intervention throughout the blocks across the lifespan. The emphasis is on movement and function. The ICF model provides a framework for students to organize patient data. Patient types range from uncomplicated to complex with respect to medical conditions. Students develop treatment plans for a wide range of patients including complex patients with multiple comorbidities and varying social determinants of health. The students base their decisions on available evidence.
Elective I & Elective 2/Advanced Practice Elective Learners will have the opportunity to take two, 2-credit elective courses on a variety of topics relevant to advanced practice, professional development, and lifelong learning. Elective courses will use a combination of synchronous and asynchronous online learning, including case-based learning, small and large group discussion, and team-based learning. Planned topics for elective courses with align with potential post-professional career pathways for physical therapists, and may include: neurologic physical therapy, orthopaedic physical therapy, acute care physical therapy, pediatric physical therapy, sports physical therapy, rehabilitation of the performing artist, women's health physical therapy, cardiovascular and pulmonary physical therapy, business/health administration, research, and education. (ME.716.88X) [2 credit hours]	Advanced practice topics are covered throughout the clinical blocks **DPTE 514, 520, 522, 524, 525, 527. Students are introduced to dry needling, advanced manual therapy, vestibular rehabilitation, and women's health/pelvic health. Advance professional topics include advocacy that affects physical therapy and participation in advocacy efforts and a debate around the current year motions in the APTA House of Delegates. Students also can work with faculty on their research projects. Another advanced opportunity is the participation the American Academy of Orthopedic Manual Therapy's Student Interest Group to learn about advanced orthopedic practice. Student PPOs (Professional Practice Opportunity) can be in any area of physical therapy and are advanced.**
Capstone III, learners submit their final Capstone project, culminating in a deliverable (e.g., a paper, website, video, online modules, etc.). (ME.716.854) [2 credit hours]	There is no capstone project. Students participate in **research seminars in DPTE 520, 522, 524, 525, 527 and the use of evidence to drive clinical practice is emphasized in all didactic clinical blocks (DPTE 513, 520, 522, 524, 525, 527).**
Clinical Education III Clinical Education III is the third full-time clinical experience. This supervised experience will span 12 weeks. (ME.716.920) [8 credit hours]	**DPTE 547** Full Time Clinical Experience III is the third, and final, full-time clinical experience. Students are provided the opportunity to continue to apply their didactic knowledge, develop professional behaviors, and practice patient/client management in another clinical setting. **Students perform all aspects of the patient-client management model, as described in DPTE 545.** The clinical experience is **12 weeks** in length. [8 SCH]

The DPT program at UMSOM integrates a variety of active learning approaches to meet the needs and learning preferences of the current student population. These include, but are not limited to: (a) pre-class

preparation activities using the online learning management system such as asynchronous lectures, technique videos, readiness assessments, (b) dynamic in-person lectures delivered by content experts, (c) application, synthesis, and critical thinking small-group activities using in-person collaborative learning and interactive discussions, (d) in-person laboratory experiences using cameras, motion capture systems, simulation, role play, and patient educators. UMSOM DPT students complete 32 weeks of full-time clinical education experience, as well as part-time experiences that occur while they complete the didactic component of the curriculum.

The proposed hybrid JHU DPT program will require students and faculty, in addition to didactic instruction through synchronous and asynchronous online learning, to "travel to Johns Hopkins 10 times over the duration of the program for onsite, immersive lab experiences delivered via a face-to-face model of instructional delivery" for a total of 5-10 days for each of the immersive lab experiences. It will also include 35 weeks of full-time clinical education experiences which will require the "geographically diverse applicants from across the nation" to complete this requirement in the Johns Hopkins Health System, which is based in Baltimore, Maryland, if a "high-quality clinical experience in their own community" is not identified.

It is difficult to compare a private university to a state university with regards to tuition and fees, given that the University of Maryland School of Medicine (UMSOM) is heavily regulated by the State of Maryland and a private university can offer students many scholarships options and other forms of financial aid to help cut costs. However, the total tuition costs at JHU and UMSOM are comparative:

Comparison of tuition and fees:
Johns Hopkins Proposed DPT program and UMSOM PTRS DPT program

	Johns Hopkins University	UMSOM: In-State^	UMSOM: Out-of-State^
Total Tuition	$136,000	$76,813	$131,093
Total Fees	$16,205	$8,208	$8,208
TOTAL	$152,205	$85,021	$139,301

^Current rates for the incoming UMSOM DPT Class of 2026.

Regarding admission requirements and graduation requirements, all accredited DPT programs are subject to the same Commission on Accreditation in Physical Therapy Education (CAPTE) standards making them fundamentally duplicative[18].

Evidence of Current Student Enrollment

UMSOM has a total of 3,036 graduates from its DPT education programs since 1958. The DPT Class of 2021 achieved a 98.5% ultimate pass rate on the national physical therapy licensing exam (NPTE), and the graduating Class of 2022 had an ultimate pass rate of 92.2% at the end of FY22, exceeding the CAPTE Standards and Required Elements for Accreditation of Physical Therapist Education Programs[18].

The candidates applying to the University of Maryland School of Medicine (UMSOM) DPT program continue to be of the highest quality. However, a recent review of UMSOM DPT admissions data shows a **significant** decline in the number of students applying to the program.

[18] Commission on Accreditation in Physical Therapy Education (CAPTE). Accreditation Handbook. https://www.capteonline.org/about-capte/policies-and-procedures/accreditation-handbook (accessed 05 January 2023).

Cycle	# applications complete/verified/reviewed on PTCAS	% applications that did not meet admission criteria	# applicants who declined admission
2017-2018	664	183 (28%)	87
2018-2019	550	140 (25%)	88
2019-2020	515	108 (21%)	53
2020-2021	543	99 (18%)	96
2021-2022	460	76 (17%)	109
2022-2023	376	60 (16%)	TBD

This decline in applications is a national trend. The American Physical Therapy Association provided a 2022-23 Application Cycle Update[19] indicating the national application cycle is trending behind the 2021-22 cycle. A total of 74,220 applications were received by 293 programs for the 2022-23 cycle, which "reflects is a 6.13% decrease in verified applicants and a 16.41% decrease in verified applications over the same date in the 2021-22 application cycle". This communication supports the September 27, 2022, PTCAS Applicant Overview[20] publication from ACAPT indicating, and shown in the table below, an overall decline in applications for the 2018, 2019, 2020, and 2021 admission cycles. Data provided by PTCAS for the 2022-23 cycle reports a 16.96% decrease in verified applications and a 5.31% in verified applicants. The approval of an additional DPT program will impact the number of applications the UMSOM DPT program will receive.

Admissions Cycle	# of PTCAS Applications	% Change in Applications from Previous Cycle	# of PTCAS Applicants	% Change in Applicants from Previous Cycle	Applications Per Applicant Ratio	# of Accepted Applicants	Acceptance Rate
2016-17	118,620	4.0%	19,025	3.0%	6.2	9,707	51.02%
2017-18	112,373	-5.3%	18,359	-3.5%	6.1	10,393	56.61%
2018-19	98,773	-12.1%	17,834	-2.9%	5.5	10,578	59.31%
2019-20	92,225	-6.6%	17,843	0.1%	5.2	11,566	64.82%
2020-21	97,786	6.0%	17,806	-0.2%	5.5	11,815	66.35%
2021-22	94,977	-2.9%	17,862	0.3%	5.3	12,617	70.64%

Evidence Existing Program Meets Market Demand

CAPTE requires employment rates for graduates meet at least 90%, averaged over two years. An accredited DPT program is required to provide the two-year employment rate for the last two academic years for each cohort based on the number of graduates who sought employment and the number of graduates employed within one year of graduation. This requirement is reported to CAPTE and is required to be posted on the University of Maryland School of Medicine's website, which plays a significant role in program advertising and recruiting for prospective students. The University of Maryland School of

[19] American Physical Therapy Association. Prepare for New PTCAS Cycle 2023-24. Email correspondence dated 10 January 2023.

[20] American Council of Academic Physical Therapy (ACAPT). PTCAS applicant overview, Sep 27, 2022. https://acapt.org/news/news-detail/2022/09/27/ptcas-applicant-overview (accessed 09 January 2023).

Medicine's DPT one-year employment rates are 100% from past classes. As a state institution, the UMSOM DPT program strives to retain 50% of its graduating class in Maryland to serve the state. The addition of a new program will harm existing programs in their ability to meet the CAPTE post-graduate employment requirements, which will ultimately impact recruitment efforts.

Saturation of Learning Placement Sites

The approval of the proposed Johns Hopkins University DPT application, a principal duplication of the University of Maryland School of Medicine's DPT program (UMSOM DPT), would cause demonstrable harm to the UMSOM DPT program by exacerbating current challenges in terms of identifying clinical education sites. Based on the requirements of the Commission on Accreditation in Physical Therapy Education (CAPTE)[21], students enrolled in an accredited DPT program are required to complete a minimum of 30 weeks/1,050 hours of full-time clinical education experience, as well as part-time experiences that occur while they complete the didactic component of the curriculum. These two requirements create an overwhelming demand on facilities in order to meet the needs required for graduation. Each year, the UMSOM DPT program faces significant challenges in accommodating the requirements for physical therapy student clinical placements. The University of Maryland School of Medicine, Department of Physical Therapy and Rehabilitation Science, has an established collaborative working relationship with the University of Maryland Rehabilitation & Orthopaedic Institute and the University of Maryland Medical System Rehabilitation Network (UMRN). This extensive network is comprised of 16 sites which cover the entire state from the eastern shore to western Maryland. Despite this widespread system, UMRN fulfills approximately 34.8% of the need for full-time placements and 22.9% of the need for part-time placements.

The University of Maryland School of Medicine still relies on other hospitals, outside of the network, to provide quality educational experiences to students in the DPT program. The UMSOM DPT program competes for these additional clinical education sites with existing programs in the region and nationally. Of the 156 sites the UMSOM DPT program has contracts with to accept students, 77 of these sites are out-of-state. Sites are evaluated annually and typically do not specifically state how many students they will accept. Numerous factors are considered by sites before accepting students including staffing needs, ability/eligibility (newly licensed physical therapists are not immediately qualified to be a Clinical Instructor following graduation, they must be a licensed physical therapist for at least one year[22]), interest/willing to serve, number of contracts a site has with other programs, administrative burden, and onboarding requirements/time. The fast-changing environment and dynamics in a post-pandemic era make it hard to predict the availability of proposed clinical education sites. The JHU DPT proposal indicates students seeking clinical placements in the Baltimore/DC region will be placed in Johns Hopkins facilities, however, they expect a **"significant"** proportion of students who live in other states/regions will request clinical placements in their home states/cities, further saturating the availability of learning placement sites and increasing the difficulty for existing programs to secure the required clinical hours needed for graduation. The JHU DPT program will have to compete with existing programs to identify out-of-state clinical placements, as well as in-state clinical placements for those students who request to complete their clinical education in their Maryland home cities instead of relocating to the Baltimore/DC area.

In earlier decisions (9/21/21 and 5/10/23), the Maryland Higher Education Commission recognized this challenge and "took noted of the substantial number of programs in the states surrounding Maryland, many of which utilize clinical placement sites in and around Maryland". MHEC also recognized that students in existing DPT programs "may experience increased difficulty in securing the required clinical hours with even a slight rise in number of students needing placements statewide". This finding has not substantially

[21] The Commission on Accreditation in Physical Therapy Education (CAPTE), https://www.capteonline.org (accessed 20 March 2023).
[22] APTA Credentialed Clinical Instructor Program, https://www.apta.org/for-educators/clinical-education-development (accessed 12 June 2023)

changed and as previously mentioned, the addition of 27 new DPT programs nationwide will only further exacerbate the saturation of learning placement sites.

Thank you for considering our view. Based on these objective facts, the University of Maryland, Baltimore strongly objects to the proposed Johns Hopkins University Doctor of Physical Therapy academic program.

Sincerely,

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